Comparing Consumer-directed and Agency Models for Providing Supportive Services at Home

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Objective. To examine the service experiences and outcomes of low-income Medicaid beneficiaries with disabilities under two different models for organizing home-based personal assistance services: agency-directed and consumer-directed.

Data Sources. A survey of a random sample of 1,095 clients, age 18 and over, who receive services in California's In-Home Supportive Services (IHSS) program funded primarily by Medicaid. Other data were obtained from the California Management and Payrolling System (CMIPS).

Study Design. The sample was stratified by service model (agency-directed or consumer-directed), client age (over or under age 65), and severity. Data were collected on client demographics, condition/functional status, and supportive service experience. Outcome measures were developed in three areas: safety, unmet need, and service satisfaction. Factor analysis was used to reduce multiple outcome measures to nine dimensions. Multiple regression analysis was used to assess the effect of service model on each outcome dimension, taking into account the client-provider relationship, client demographics, and case mix.

Data Collection. Recipients of IHSS services as of mid-1996 were interviewed by telephone. The survey was conducted in late 1996 and early 1997.

Principal Findings. On various outcomes, recipients in the consumer-directed model report more positive outcomes than those in the agency model, or they report no difference. Statistically significant differences emerge on recipient safety, unmet needs, and service satisfaction. A family member present as a paid provider is also associated with more positive reported outcomes within the consumer-directed model, but model differences persist even when this is taken into account. Although both models have strengths and weaknesses, from a recipient perspective the consumer-directed model is associated with more positive outcomes.

Conclusions. Although health professionals have expressed concerns about the capacity of consumer direction to assure quality, particularly with respect to safety, meeting unmet needs, and technical quality, our findings suggest that the consumer-directed service model is a viable alternative to the agency model. Because public programs are under growing pressure to address the long-term care needs of low-income people of all ages with disabilities, the Medicaid personal assistance benefit needs to be reassessed in light of these findings. Consumer-directed models may offer a less elaborate and possibly less costly option for organizing supportive services at

home. Study limitations may limit the generalizability of these findings. This was a natural experiment, in which only some counties offered both service models and counties assigned recipients to a service model. The use of a telephone survey excluded important recipient subsets, notably people with severe cognitive impairments. A more definitive study would include direct observations as well as survey approaches.

Key Words. long-term care, home care, personal assistance, Medicaid, disability

A major focus of the current health policy debate concerns the effects of alternative models for delivering acute care health services on the quality and outcomes of care. In the area of home-based long-term care, where the focus is on maintaining and enhancing function and providing support, similar quality concerns have been raised about the effects of different models for organizing services. This debate has become more salient as advocates for younger persons with disabilities have proposed that states be required to offer personal assistance services to people of all ages with disabilities through consumer-directed individual providers as well as through traditional home care agencies (Batavia, DeJong, and McKnew 1991; White House Domestic Policy Council 1993). The home care agency model is a familiar one and is available in most states that offer Medicaid's personal assistance benefit. Home care agencies staffed by nurses, social workers, and paraprofessional aides are reimbursed to provide care to people in their own homes. Workers are trained and monitored by agency supervisors, and agencies are accountable to varying degrees for the care they provide. The "consumer-directed" model is less widespread and familiar. In this model (adopted by several states under Medicaid personal assistance), the recipient of services (or a proxy) assumes responsibility for most of the organizational tasks traditionally performed by agencies. Recipients typically recruit and hire their own providers, and train, supervise, and replace them as needed (Batavia, DeJong, and McKnew 1991; Doty et al. 1994; Doty, Kasper, and Litvak 1996). The public entity that administers the benefit usually pays providers directly, although funds may be channeled through the recipient.

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The stakes are high in this debate. The numbers of those needing supportive services are growing both among the elderly and among younger age groups with diverse physical, cognitive, and psychological disabilities (LaPlante 1996). In the debate, supporters of consumer-directed services emphasize consumer choice, individual independence and autonomy, and low costs (Sabatino and Litvak 1992). Proponents of agency-based services stress accountability, professional authority, and quality assurance, and are skeptical that consumer direction can protect client safety, address unmet needs, and assure technically competent and effective service provision. Cross-cutting this debate about models is the argument that preferences about service arrangements may vary by age, and that consumer direction may appeal primarily to the younger disabled while older persons are likely to embrace more familiar agency arrangements (Eustis and Fischer 1992; Simon-Rusinowitz and Hofland 1993). Although much has been learned about variations in the way services are organized across states under the Medicaid personal assistance benefit (Lewis-Idema, Falik, and Ginsburg 1991; Doty, Kasper, and Litvak 1996), little research has been published regarding the effects of alternative delivery models on service users. Further complicating this debate is the opportunity (which varies across Medicaid programs) to employ family members as paid providers under the consumer-directed model (Keigher 1991; Simon-Rusinowitz, Mahoney, and Benjamin 1998). To what extent are any positive outcomes associated with consumer direction substantially the result of receiving services from a relative?

To address these issues, we conducted a study of clients who receive personal assistance services under two models: agency-based and consumer-directed. Our principal objective was to understand whether the way services are organized has consequences for recipients, and if so, to determine how. In addition, we sought to understand whether (1) the relationship of the provider to the client, (2) recipient characteristics (age, gender, ethnicity, education, work status, income, marital status, and living arrangement), and (3) recipient case mix (severity/approved hours, daily activity limitations, presence of paralysis, use of equipment, need for paramedical help, and cognitive status) accounted for any differences in recipient outcomes across models.

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The study setting was the In-Home Supportive Services (IHSS) program in California, funded primarily under MediCal (Medicaid) with state and county shares. This program provides personal care, household, paramedical, protective supervision, and medical transportation services to about 200,000 low-income recipients of all ages (including children) at any given time. Every prospective recipient receives an in-home assessment. Those persons assessed as eligible may receive up to 283 hours of services per month. State law mandates that IHSS services be provided through the consumer-directed model in all 58 counties. Importantly, the program permits recipients in the consumer-directed model to hire anyone they choose as a provider, including family members. Since federal regulations restrict the hiring of spouses and parents of minors (Lewis-Idema, Falik, and Ginsburg 1991), IHSS draws on state and local funds to reimburse immediate family members.

Counties also have the option to contract with home care agencies to deliver services to persons judged inappropriate for consumer direction. Twelve counties currently exercise this option. In these option counties, the decision about client assignment to a service model is made by a county case manager after the in-home assessment. Case managers are most likely to assign to agency-based services those eligible persons who express a preference for this model, those who live alone, those who are socially isolated and thus are expected to have difficulty hiring their own worker, and those with less severe needs. (More severely impaired recipients need more service hours, and agency-based hours cost more than twice the consumer-directed ones.) Within these counties, assignment to agency-based IHSS services is not simply a matter of consumer choice; it is also subject to professional discretion, which is influenced, among other things, by consumer preferences.

METHODS

A random sample of 1,095 IHSS recipients were interviewed using computer-assisted telephone interviewing (CATI) between October 1996 and March 1997. The sample was drawn from a listing of all program recipients over the age of 18 in the California Management and Information Payrolling System (CMIPS) in mid-1996. Interviews were conducted in English, Spanish, and three Asian languages (Cantonese, Mandarin, and Vietnamese). Persons under age 18 and those with severe cognitive impairment (as indicated in CMIPS assessment scores on memory, orientation, and judgment) were excluded from the sample frame. The recipient sample was stratified by service

model (consumer-directed and agency model), by age (over and under age 65), and by a proxy for severity, that is, number of service hours approved (over and under 20 hours per week). The recipient sample for the consumer-directed model (CDM) was drawn from all 58 counties, and the sample for the professional agency model (PAM) was drawn from the 12 counties offering that model. The recipient response rate was 77.8 percent.[1]

The telephone interview instrument included items about recipient demographics, functional status (Katz and Akpom 1976; Lawton 1971), mental and emotional status (Ware and Sherbourne 1992), IHSS service use, informal and community supports (Kemper 1988), and three recipient outcomes: safety, unmet service needs, and service satisfaction. Established measures were used where appropriate; in some instances, they were adapted to the study population or the objectives, or both. Items on recipient safety addressed a range of IHSS provider behaviors, provider-recipient interactions, and the home environment (Coyne, Reichman, and Berbig 1993; Fulmer, 1991; and Kinney and Stephens 1989). Unmet need was assessed using measures developed by Allen and Mor (Allen and Mor 1995; Mor and Allen 1993; Mor et al. 1991). Client satisfaction measures were adapted from those developed by Davies and Ware (1991, 1988) and Marshall and Hays (Marshall and Hays 1994; Marshall et al. 1993) on medical outcomes, and those of Leon (1994) and others (Applebaum et al. 1988; Nosek 1987) on home care. Factor analysis of these outcomes resulted in nine outcome dimensions: (1) physical and psychological risk, (2) sense of security, (3) unmet activities of daily living (ADL) needs, (4) unmet instrumental activities of daily living (IADL) needs, (5) service technical quality, (6) provider shortcomings, (7) service impact, (8) general service satisfaction, and (9) provider interpersonal manner. (See appendix.)

All outcome analyses were done at the recipient level using multiple regression based on the general linear model. All analyses incorporated sampling weights and accounted for design effects (Kish 1967) using the Stata statistical software package (StataCorp 1997). Predictor variables included service model (CDM, PAM), type of CDM provider (family, non-family), recipient demographics, and recipient case mix. Although we include many demographic and case-mix measures, the primary focus of the analysis is the service model. For service model and type of CDM provider, a contrast coding scheme was used. Unlike a dummy coding scheme, contrast coding allows us to change the excluded category in order to examine any two-way comparison of interest (Cohen and Cohen 1983; Marascuilo and Serlin 1988). In the first contrast, PAM recipients are compared to all CDM recipients. In

the second contrast, CDM recipients with paid family providers are compared to CDM recipients with non-family providers.

RESULTS

Data were analyzed from completed interviews with 584 recipients of the PAM and 511 recipients of the CDM. Very close to half of each cohort was over age 65, and about three-fourths were female (see Table 1). There were more whites in the PAM (69.8 percent) than in the CDM sample (38.3 percent). In turn, the CDM sample was more diverse ethnically/racially, with more African Americans (23.1 percent), Latino(a)s (19.5 percent), and Asian Americans (11.6 percent). Even with sample stratification by approved service hours, the CDM sample was more impaired functionally, with 42.6 percent having three or more ADL impairments and 92.3 percent having three or more IADL limitations, compared with 14.7 percent and 67.0 percent, respectively, in the PAM sample (data not shown). Because the PAM involves employees assigned by the agency, only 6.3 percent of PAM clients knew their worker prior to the service relationship. Because the CDM permits recipients to hire anyone as provider, only about one-fourth (26.8 percent) of the CDM clients did not know their worker previously. Nearly half (47.3 percent) were relatives and one-quarter (26.8 percent) were friends or acquaintances.

   Mean scores (weighted) for each outcome variable were computed by service model (see appendix). Without considering other variables, some differences by service model are statistically significant for six of the nine outcome dimensions. For five of these six dimensions, CDM recipients rated the services received more positively than did PAM users. On unmet ADL needs, PAM clients had higher scores, which means that they reported fewer unmet needs.[2]

   Table 2 presents regression equations in which service model, CDM provider relationship, recipient demographics, and case mix are regressed on outcomes. In seven of the nine equations, differences between service models are statistically significant, and in each case CDM scores are more positive. Taking into account the type of CDM provider and various characteristics of the recipient, recipients of consumer-directed services report more positive outcomes than do PAM recipients across safety, unmet (IADL) needs, and service satisfaction. When considering type of CDM provider, those recipients with family providers report more positive outcomes than do those with non-family workers on five outcomes related to safety and service satisfaction, controlling for service model and recipient characteristics.

Table 1   Predictor Variables by Service Model

Variables	PAM (N = 574)	CDM (N = 511)
Demographics		
Age (% 65 and over)	50.0	53.6
Gender (% female)	76.8	69.9
Ethnicity (%)		
White	70.3	38.3
Latino(a)	8.5	19.5
Asian American	1.6	11.6
African American	11.4	23.1
Other	8.2	7.5
Education (% high school or more)	64.0	50.6
Work (%)		
Never worked/Students	6.0	13.3
Unemployed	47.0	48.7
Work full, part-time, retired	47.0	38.0
% who pay share of cost (income)	13.8	1.7
Marital status (%)		
Married	13.2	15.9
Never married	16.8	19.8
Widowed, divorced, separated	70.1	64.4
Live alone (% yes)	70.2	42.7
Case Mix		
Severe (%)	12.4	51.9
Activities of Daily Living (ADL) (0–6, 0 = intact) (mean/s.d.)	0.97 (1.43)	2.41 (2.00)
Instrumental ADL (IADL) (0–5, 0 = intact) (mean/s.d.)	2.97 (1.24)	3.93 (0.96)
Paralysis (% yes)	4.7	14.3
Equipment scale (0 = none, 3 = wheelchair) (mean/s.d.)	1.51 (1.15)	1.94 (1.15)
Paramedical help scale (mean/s.d.)	0.28 (0.68)	0.82 (1.05)
Memory, orientation, judgment (3–6, 3 = intact) (mean/s.d.)	3.4 (0.79)	3.4 (0.81)

Table 2   Regression Coefficients Predicting Safety, Unmet Needs, and Satisfaction Outcomes

| | Safety | | Unmet Needs | | | | Satisfaction | | |
Service Model (Range)	Physical and Psychological Risk	Sense of Security	Unmet ADL Needs*	Unmet IADL Needs*	Technical Quality	Provider Shortcomings	Service Impact	General Satisfaction	Interpersonal Manner
PAM (vs. CDM)	-.27	-.44***	-.09	-.22*	-.97**	-.59*	-.59***	-.49**	-.96***
CDM family provider (vs. CDM non-family provider)	.52***	.67***	.20	.06	.55*	.64*	-.05	.44**	1.11***
Demographics									
Age (1 = GT 65)	.06	-.20	.22	.41**	-.21	.03	-.55**	.27	-.30
Gender (1 = female)	.00	.01	-.04	-.05	-.08	-.03	.04	.01	.02
Ethnicity									
Latino(a) (vs. white)	.09	-.41*	-.11	.01	.44	-.93*	-.91***	-.16	.10
Asian (vs. white)	.34	-1.04***	-.29	-.27	-.25	-2.14***	-.21	-.48	-.05
African American (vs. white)	-.11	.04	-.31	-.05	-.41	-.47	-.16	-.07	.08
Other (vs. white)	-.13	.16	-.48	-.34	-.79	-.22	-.31	-.17	-.50
Education: High school or more (vs. < HS)	-.09	.07	.01	-.09	.06	.48	.26	-.01	-.27
Work									
Never worked (vs. employed, retired)	-.07	-.24	.11	-.05	.05	-.01	-.12	.10	-.32
Unemployed (vs. employed, retired)	.14	.03	.05	-.01	.35	.75*	-.12	.07	-.17
Income (client pays share of cost)	-.40	.02	.08	-.14	-.30	.10	-.06	.03	-.14
Marital Status									
Married (vs. div, sep, widow)	-.34	.00	-.12	-.10	-1.10*	-.28	-.28	.04	-.56
Never married (vs. div, sep, widow)	.11	-.06	.34*	.17	.11	.20	.20	.31	-.07
Live alone (1 = yes)	.03	.35**	-.18	-.16	.24	.15	-.21	.10	.00

Case Mix

Severe vs. not severe (1 = severe)	−.37	−.09	.43*	.29	−.74*	−.23	.28	.19	.06
ADLs (high = more impairment)	.05	.07	−.23***	−.04	−.05	−.05	−.12*	−.04	−.05
IADLs (high = more impairment)	.04	.04	−.09	−.02	.19	−.02	.09	.10	.12
Paralysis (1 = yes)	.25	.10	.11	.06	.73	.25	.18	.45*	.24
Equipment use (0 = none; 3 = wheelchair)	−.06	−.04	−.07	−.03	.05	.19	.16*	−.08	.09
Paramedical help (0–6)	−.39***	−.18	−.29**	−.23*	−.35	−.30	−.16	−.16	−.04
Memory, orientation, judgment (high = worse)	−.04	−.14	−.00	−.07	−.06	−.30	−.08	−.24*	.10
R-squared	.098***	.197***	.238***	.109***	.087**	.143***	.148***	.077**	.237***

* $p < .05$; ** $p < .01$; *** $p < .001$.

Note: Higher scores = more safe, fewer needs, more satisfaction.

† ADL = Activities of daily living.

‡ IADL = Instrumental activities of daily living.

DISCUSSION

Prior debate about the appropriate role of consumer direction in organizing supportive, home-based services for elderly and disabled persons has been hampered by the absence of empirical research. This study provides the first systematic examination of consumer-directed services and their consequences for recipients compared with consequences of traditional agency-directed services. The least debatable finding from these data is that, from a recipient perspective, both models are associated with positive outcomes and absolute differences between them on various outcome dimensions are not large. This is true not just for satisfaction measures, which may be susceptible to response set bias (Stewart and Ware 1992), but also for the more behaviorally oriented measures of safety and unmet needs. Because consumer direction effectively omits the home care agency and professional from the service relationship and by any standard is the leanest of home care models, there is widespread concern about its potentially negative effect on people with disabilities. From the recipient viewpoint, however, the outcomes of consumer direction are at least as positive as those for the agency model.

In fact, when recipient characteristics and condition are taken into account, users of the CDM report more positive outcomes than PAM users on several dimensions of safety, unmet needs, and service satisfaction. The fact that recipients can hire family members in the CDM is an important feature of a service model that shifts provider recruitment to the recipient and (in IHSS at the time of this study) provides little or no formal program assistance in finding a worker. Even when the effect of having a family provider is accounted for, however, statistically significant differences persist that favor the CDM on a majority of outcomes.

How do we make sense of these findings? What might account for the success of a model that transfers the burden of organizing services to the very people whose disabilities make the services necessary? Drawing on other interview data regarding the nature of the service delivery experience within the two models (Benjamin, Matthias, and Franke 1998), several explanations emerge. First, as is axiomatic in so much of long-term care, CDM recipients depend on non-program resources, especially family and friends, to make the model work despite the absence of agency resources. The role of informal resources is one dimension of a much broader theme: the CDM promotes consumer choice and thus enhances the likelihood of compatibility between recipients and providers.

On average, PAM recipients have relatively little say about who their providers are, since the agency makes worker assignments. More PAM users experience worker turnover and schedule changes, because agencies rotate workers to create scheduling efficiencies. Agencies establish clear rules about non-allowable tasks (e.g., climbing stools and ladders; performing paramedical tasks) thus limiting the ability of the recipient to negotiate for services outside those specifically authorized by IHSS. PAM providers have tight schedules and firm work rules that do not allow for much flexibility and permit very few unpaid service hours. While PAM providers clearly receive more formal training than their CDM counterparts, this training is general in nature and not tailored to particular recipients.

In the CDM, the match between recipient and worker is done as the recipient makes hiring decisions. On average, recipients have more choice in naming their provider, and even where that choice is limited, the selection is likely to be "familiar" (i.e., family or friend). Persons hired as providers are more likely to match the recipient ethnically and linguistically. CDM workers have longer tenures in the job, are more likely to perform non-authorized tasks, and more often work extended (unpaid) hours. Finally, although these workers receive little formal home care training, they report receiving considerable on-the-job, client-specific training from home health nurses, physical therapists, and physicians. As a result, the average CDM provider may be better trained to work with a given recipient and may acquire skills better tailored to the needs of that client.

This study has several limitations. First, it has been conducted in one well-established program in one state, so the findings may be shaped by conditions particular to IHSS in California. Second, the data are drawn from a natural experiment rather than a controlled one, so the results might be different if recipients were randomly assigned to alternative service models. Because case manager discretion is involved when option counties assign recipients to the PAM and CDM, assignment is not random or precise and may raise issues of generalizability. Third, because data were collected in a cross-sectional survey, limits are placed on what we can say about recipients in the two models as they cope over time with changing circumstances and service crises. Fourth, given the constraints of a telephone survey, we relied on respondent reports and were unable to assess functional status and health status directly. Consequently, we cannot generalize the results to populations, such as the cognitively impaired, about whom we have the most concern. A more definitive study would also rely on observation as well as self-reports about recipient health status and care quality. Finally, because we excluded

the severely cognitively impaired from the telephone survey, we can say little about what consumer direction means for those people least likely to direct their own services.[3]

Even with these limitations, the findings from this study suggest that consumer direction may have an important place in planning for long-term care. The most powerful aspect of these findings is their consistency across varied outcomes. Although absolute outcome differences across the two models are not great, there is evidence that when we ask people with disabilities to organize and direct their own services, outcomes are likely to be more positive. While there is no evidence here that the agency model is associated with unfavorable outcomes, the data do suggest that choice has benefits in the eyes of recipients.

Moreover, the advantages associated with consumer direction are not simply the result of permitting recipients to hire family providers. While paying family providers is also associated with positive outcomes, it represents only part of the CDM "advantage." This is important not only practically for the design and implementation of consumer-directed services but also because hiring family members is not a practice uniformly embraced by supporters of consumer direction. Many advocates for younger adults with disabilities oppose the hiring of family members in service roles, because family ties are seen as constraints on the autonomy of consumers in selecting and directing their service workers.

Although home care involves nurses, therapists, and other skilled professionals, much of home care is not highly technical but involves maintenance and support (thus the label "personal assistance"). Much of the recent, highly publicized increase in Medicare home health spending is attributed to expanded home health aide visits for people with long-term, chronic conditions who have few other options for formal assistance. It is likely that as limits on Medicare spending are implemented, the burden of long-term caring will shift back to informal systems and to the Medicaid program. This study suggests that less elaborate (and possibly less costly) consumer choice models, already in place under the Medicaid personal assistance benefit in several states, may be a viable alternative to traditional agency-based home care.

APPENDIX

Definitions and Mean Scores for Outcome Variables

| | | PAM | CDM | |
| | Outcome Variable Definition | (N = 584) | (N = 511) | |
Variable (range)	C = client, P = provider	mean (s.d.)	mean (s.d.)	p-Value
SAFETY				
1. Physical and psychological risk (8–30)	P threatened C, yelled at C, suspected of stealing, pushed or shoved C, neglected or ignored C, under the influence, injured C while assisting, unwanted sexual advances	29.05 (2.31)	29.25 (1.95)	.142
2. Sense of security (2–10)	How safe C feels with P, how well C gets along with P	8.96 (1.65)	9.18 (1.57)	.021
UNMET NEEDS				
1. ADL unmet needs (0–6)	Number of ADL needs unmet due to not having help*	5.38 (1.21)	5.07 (1.54)	.000
2. IADL unmet needs (0–5)	Number of IADL needs unmet due to not having help†	4.28 (1.18)	4.37 (1.24)	.199
SATISFACTION				
1. Technical quality (5–25)	P competent, well-trained, services perfect, P appreciates directions, P makes home orderly	20.07 (3.82)	20.90 (3.31)	.000
2. Provider shortcomings (3–15)	P needs to respect C, P needs to listen, hurries too much, P frequently late	10.65 (2.91)	10.64 (3.47)	.984
3. Service impact (2–10)	P services make it easier to do things inside the home and outside the home	7.63 (1.96)	8.09 (1.98)	.000
4. General satisfaction (2–10)	C satisfied with how P meets personal care needs and housekeeping needs	8.66 (2.07)	9.06 (1.65)	.000
5. Interpersonal manner (2–9)	Closeness of relationship with P; C can share feelings with P	6.43 (1.92)	7.45 (1.80)	.000

Note: Higher mean scores = more safety, fewer needs, more satisfaction.

* ADL = activities of daily living.

† IADL = instrumental activities of daily living.

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NOTES

1. Additional analyses not shown here involved regression equations that contained a variable for recipient residence in the 12 "option" counties, in order to take into account the different model selection processes in the CDM/PAM option counties ($n = 12$) and the CDM-only, non-option ones ($n = 46$). This coefficient was never significant, and its inclusion had a negligible effect on other coefficients (Benjamin, Franke, and Matthias 1995).
2. All outcomes are coded so that higher scores are more positive. Thus, higher scores represent a greater sense of safety and greater service satisfaction, but fewer unmet needs (coding for the latter has been reversed).
3. With additional funding from the U.S. Department of Health and Human Services, we did 50 personal, open-ended interviews with cognitively impaired recipients over age 65 and their surrogates. Data are still being analyzed.

REFERENCES

Allen, S. M. and V. Mor. 1995. The Prevalence of Unmet Need for Assistance with Daily Living Tasks Among Older and Younger Adults with Disability in Springfield, MA. Center for Gerontology and Health Care Research, Brown University.

Applebaum, R. A., J. B. Christianson, M. Harrigan, and J. Schore. 1988. "The Evaluation of the National Long-Term Care Demonstration: 9. The Effect of Channeling on Mortality, Functioning, and Well-Being." *Health Services Research* 23 (1): 143–59.

Batavia, A. I., G. DeJong, and L. B. McKnew. 1991. "Toward a National Personal Assistance Program: The Independent Living Model of Long-Term Care for Persons with Disabilities." *Journal of Health Politics, Policy and Law* 16 (3): 523–45.

Benjamin, A. E., R. E. Matthias, and T. M. Franke. 1998. Comparing Client-Directed and Agency Models for Providing Supportive Services at Home. Final report to the U.S. Department of Health and Human Services, September.

Benjamin, A. E., T. M. Franke, and R. E. Matthias. 1995. Alternative Models of Personal Assistance Services: Sampling Plan. School of Public Policy and Social Research, University of California at Los Angeles.

Cohen, J., and P. Cohen. 1983. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Coyne, A. C., W. E. Reichman, and L. J. Berbig. 1993. "The Relationship Between Dementia and Elder Abuse." *American Journal of Psychiatry* 150 (4): 643–46.

Davies, A. R., and J. E. Ware. 1991. *GHAA's Consumer Satisfaction Survey and User's Manual.* Washington, DC: Group Health Association of America.

———. 1988. "Involving Consumers in Quality of Care Assessment." *Health Affairs* 7 (1): 33–48.

Doty, P., J. Kasper, and S. Litvak. 1996. "Consumer-directed Models of Personal Care: Lessons from Medicaid." *The Milbank Quarterly* 74 (3): 377–409.

Doty, P., J. Kasper, S. Litvak, and H. Taylor. 1994. "Consumer Choice and the Frontline Worker." *Generations* 16 (3): 65–70.

Eustis, N. N., and L. R. Fischer. 1992. "Common Needs, Different Solutions? Younger and Older Homecare Clients." *Generations* 16 (4): 17–23.

Fulmer, T. 1991. "Elder Mistreatment: Progress in Community Detection and Intervention." *Family and Community Health* 14 (2): 26–34.

Katz, S., and C. A. Akpom. 1976. "A Measure of Primary Sociobiological Functions." *International Journal of Health Services* 6 (3): 493–508.

Keigher, S. M. 1991. "Wages or Welfare? Compensating Caregiving in Two Conservative Social Welfare States." *Journal of Aging and Social Policy* 3 (3): 83–104.

Kemper, P., ed. 1988. "The Evaluation of the National Long Term Care Demonstration." *Health Services Research* 23 (1, Part II): 1–198.

Kinney, J. M., and P. Stephens. 1989. "Caregiving Hassles Scale: Assessing the Daily Hassles of Caring for a Family Member with Dementia." *The Gerontologist* 29 (3): 328–32.

Kish, L. 1967. *Survey Sampling.* New York: John Wiley and Sons, Inc.

LaPlante, M. P. 1996. "Health Conditions and Impairments Causing Disability." *Disability Statistics Abstract, No. 16.* Washington, DC: U.S. National Institute on Disability and Rehabilitation Research.

Lawton, M. P. 1971. "The Functional Assessment of Elderly People." *Journal of the American Geriatrics Society* 19 (6): 465–81.

Leon, J. 1994. "National Home Care Survey." Unpublished instrument. Project HOPE, Bethesda, MD.

Lewis-Idema, D., M. Falik, and S. Ginsburg. 1991. "Medicaid Personal Care Programs." In *Financing Home Care: Improving Protection for Disabled Elderly People,* edited by D. Rowland and B. Lyons, pp. 146–77. Baltimore, MD: Johns Hopkins.

Marascuilo, L. A., and R. C. Serlin. 1988. *Statistical Methods for the Social and Behavioral Sciences.* New York: W. H. Freeman & Company.

Marshall, G. N., and R. D. Hays. 1994. The Patient Satisfaction Questionnaire Short-Form (PSQ-18). RAND, Santa Monica, CA.

Marshall, G. N., R. D. Hays, C. D. Sherbourne, and K. B. Wells. 1993. "The Structure of Patient Satisfaction with Outpatient Medical Care." *Psychological Assessment* 5 (4): 477–83.

Mor, V., and S. Allen. 1993. Draft Instrument: Springfield Study of Populations with Chronic Disabilities. Center for Gerontology and Health Care Research, Brown University.

Mor, V., S. M. Allen, K. Siegel, and P. Houts. 1991. "Determinants of Need and Unmet Need Among Cancer Patients Residing at Home." *Health Services Research* 27 (3): 338–60.

Nosek, M. A. 1987. "Outcome Analysis in Independent Living." In *Rehabilitation Outcomes: Analysts and Measurement,* edited by M. J. Fuhrer, pp. 71–83. Baltimore, MD: Paul H. Brooks.

Sabatino, C., and S. Litvak. 1992. "Consumer-directed Home Care: What Makes It Possible?" *Generations* 16 (4): 53–59.

Simon-Rusinowitz, L., and B. F. Hofland. 1993. "Adopting a Disability Approach to Home Care Services for Older Adults." *The Gerontologist* 33 (2): 167–169.

Simon-Rusinowitz, L., K. J. Mahoney, and A. E. Benjamin. 1998. "Payments to Families Who Provide Care: An Option That Should Be Available." *Generations* 22 (3): 69–75.

StataCorp. 1997. *Stata Statistical Software: Release 5.0.* College Station, TX: Stata Corporation.

Stewart, A. L., and J. E. Ware, eds. 1992. *Measuring Functioning and Well-Being.* Durham, NC: Duke University Press.

Ware, J. E., and C. D. Sherbourne. 1992. "The MOS 36-item Short-Form Health Survey (SF-36)." *Medical Care* 30 (6): 473–83.

White House Domestic Policy Council. 1993. *The President's Health Security Plan: The Clinton Blueprint.* New York: Time Books/Random House.